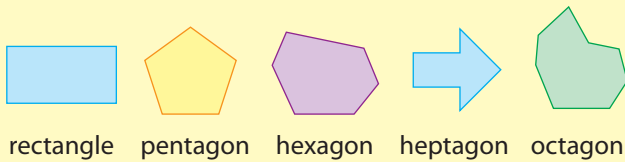
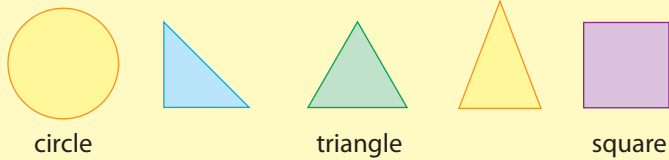


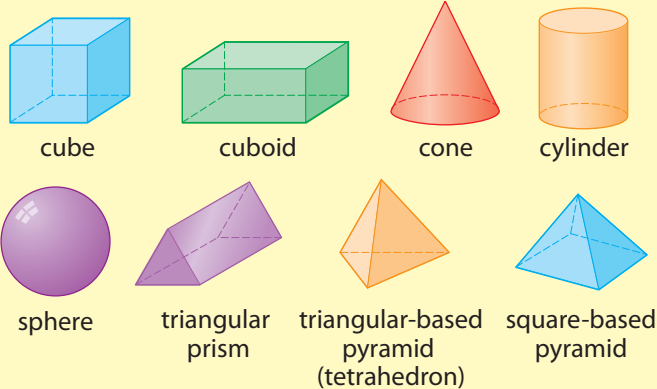
# 2

# Glossary

## 2-dimensional (2-D)

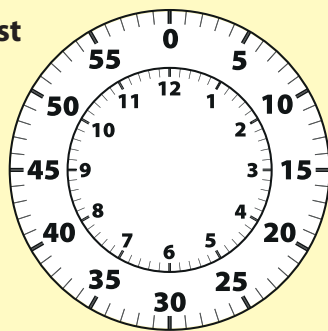


## 3-dimensional (3-D)



## 5, 10, 15... minutes past

Ways of counting minutes on an analogue clock. The minute hand takes five minutes to move between each hour mark on the clock face. See also *analogue clock*.



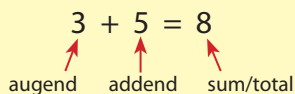
## A

### addend

The numbers being added together in an addition calculation.

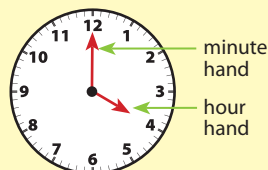
### addition

A mathematical operation combining 2 or more numbers to find a total. Augend + addend = sum (or total).



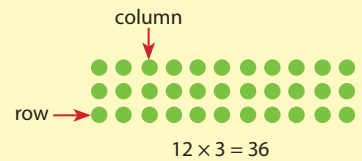
### analogue clock

A dial with hands used to show time. The dial shows 12 hours in a full circle. The minute hand moves 1 complete turn every hour.



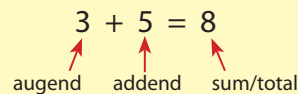
## array

An arrangement of numbers, shapes or objects in rows of equal size and columns of equal size, used to find out how many altogether.



## augend

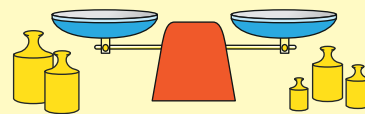
The number being added to in an addition calculation. augend + addend = sum (or total)



## B

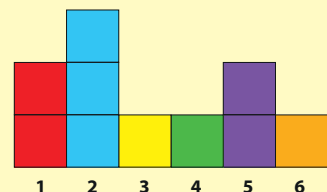
### balance

Things are balanced when both sides have equal value, e.g.  $3 + 4 = 7$  and  $100\text{g} = 1\text{kg}$ .



### block diagram

A diagram showing information. Each block stands for one object or event.



## C

### calendar

A list of the days of the year, arranged by month, week and day.

### capacity

The amount a container holds. It is measured in litres or millilitres, e.g. the capacity of a 2 litre bottle is 2 litres.

### Carroll diagram

A Carroll diagram sorts objects according to a criteria and not that criteria. There can be 2 different criteria, but always the criteria, e.g. odd numbers/not odd numbers, multiples of 5/not multiples of 5, dogs/not dogs.

	odd	not odd
< 50	23	18
not < 50	57	92

### category

A group of elements or numbers all with the same property, e.g. dogs, cats, rats are all in the category 'animals'.

## centimetre

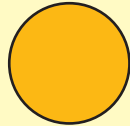
A unit of length, 1 metre = 100 centimetres. Symbol: cm.

## change

The money left over when buying something with a note or coin bigger than the amount needed. The change is given back to the buyer.

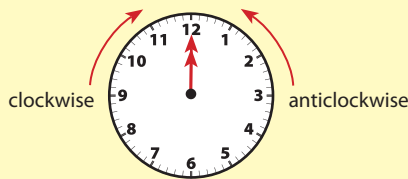
## circular

Like a circle.



## clockwise, anticlockwise

Clockwise: turning in the same direction as the hands on a clock. Anticlockwise: turning in the opposite direction to the hands on a clock.



## column

A list of numbers, shapes or objects down a page, not across, often in a table or an array.

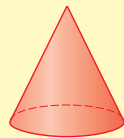


## commutative

Addition and multiplication are commutative. It doesn't matter which way you add, multiply or divide in, the answer is always the same. Same answer, different calculation, e.g.  $3 + 4 = 4 + 3$ . But subtraction is not commutative, e.g.  $7 - 2 \neq 2 - 7$ .

## cone

A 3-D shape with a flat, circular face and a curved face. It has one apex (sometimes mistakenly called a vertex) directly above the circular base.

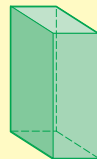


## cube

A 3-D shape made from six identical squares which all meet at right angles, e.g. a cube of sugar.

## cuboid

A 3-D shape made from 6 rectangles. 2 or 4 of the rectangles could be squares, e.g. a cereal box. A cube is a special sort of cuboid.



## curved, curved surface

A surface of a 3-D shape which is not flat, e.g. the surface of a sphere or the side of a cylinder.



## cylinder

A 3-D shape with circular ends and one curved face joining the 2 circular faces.

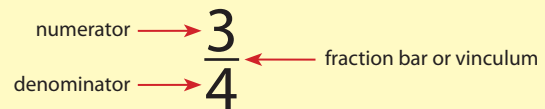
## D

### degree

A unit of temperature. °C for degrees Celsius, though Centigrade is often still used.

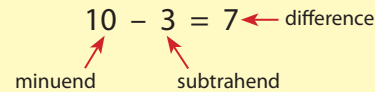
## denominator

The number underneath the line in a fraction. Also called the divisor.



## difference

The result of a subtraction. E.g. the difference between 12 and 5 is 7. See also *minuend*, *subtrahend*.

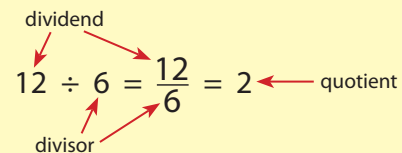


## digit

The symbols 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. The value of each digit depends on its position, e.g. in 16, the digit 1 represents one ten while the 6 represents six ones.

## dividend

The number that is divided in a division calculation, e.g. in  $12 \div 6 = 2$ , 12 is the dividend. See also *denominator*, *divisor*, *quotient*.



## division

A mathematical operation which shares or groups a quantity into a given number of parts, e.g.  $12 \div 4$  is 12 divided into 4 parts, each of value 3. It is the inverse operation to multiplication.

## divisor

The number that is used to divide in a division sum, e.g. in  $12 \div 6 = 2$ , 6 is the divisor. See also *denominator*, *dividend*, *quotient*.

## double

Two lots of something, multiply by 2.

## E

### edge

The line made where two faces of a 3-D shape meet. See also *face*, *vertex*.

### equals, equivalent

Symbol: =. Means to have the same value as, e.g.  $5 + 3 = 7 + 1$ .

### equivalent fractions

Fractions with the same value. E.g.  $\frac{2}{4} = \frac{1}{2}$ . These are equivalent fractions.

### even

A whole number which can be divided by 2, with nothing left over. It is a multiple of 2. See also *odd*.

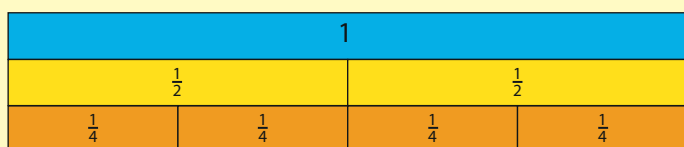
## F

### face

A flat surface on a 3-D shape. See also *edge* and *vertex*.

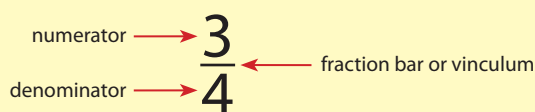
### fraction

Part of a whole.



### fraction bar

In the fraction  $\frac{3}{4}$  the numerator 3 is above the fraction bar and the denominator 4 is below.



## G

### gram

Symbol: g. A measure of mass or weight. There are 1000 grams in a kilogram. See also *kilogram*.

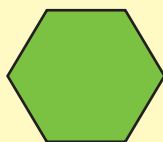
### greater than

Also called more than. Symbol: >. Used when comparing 2 numbers or measures. 10 is greater than 7, or  $10 > 7$ . See also *less than*.

## H

### hexagon

A 2-D shape with 6 straight sides.



### hour

Symbol: h. A measure of time. See also minute, second.

### hundred

One hundred, 100, is ten tens or one more than 99.

### hundreds

The position in a number where the digit represents hundreds, e.g. in 278 there is a digit 2 in the hundreds place, so there are 2 hundreds.

## I

### inverse

Addition is the inverse of subtraction, e.g.  $16 + 24 = 40$ ,  $40 - 24 = 16$ . Multiplication is the inverse of division, e.g.  $4 \times 12 = 48$ ,  $48 \div 12 = 4$ .

## K

### kilogram

Symbol: kg. A measure of mass or weight. There are 1000 grams in a kilogram. See also *gram*.



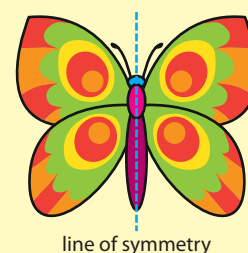
## L

### less than

Symbol: <. Used when comparing two numbers, e.g. 7 is less than 10, or  $7 < 10$ . See also *greater than*.

### line symmetry

A 2-D object or shape has line symmetry if it can be folded into two identical halves along a mirror line. Each half is a mirror image of the other.



### litre

Symbol: l. A measure of capacity. 1000 millilitres = 1 litre.

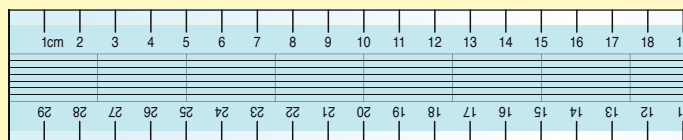
## M

### mass

Sometimes called weight. How light or heavy something is. Measured in grams and kilograms. See also gram, kilogram.

### measuring scale

A way of measuring using a line or a dial with equal marks and spacings, like on a ruler.



### mental calculation

Doing a calculation in your head, but perhaps with jottings.

### metre

Symbol: m. A measure of length or height, 100 centimetres = 1 metre.

### millilitre

Symbol: ml. A measure of capacity. 1000 millilitres = 1 litre.

### minuend

The starting number in a subtraction calculation, e.g. 10 (the minuend) - 3 (the subtrahend) = 7 (the difference). See also *subtrahend* and *difference*.

## minute

Symbol: min. A measure of time. See also second and hour.

## mixed number

A number with both a whole number part and a fractional part, e.g.  $3\frac{1}{3}$ .

## multiple, multiple of

When you start at zero and count in steps of the same size, those numbers are multiples of that step. So 5, 10, 15, 20, 25 and so on are all multiples of 5.

A multiple is the product of 2 numbers, e.g. the multiples of 3 are 3, 6, 9, 12, 15, 18 and so on.

## multiplicand

The number to be multiplied, e.g. in  $6 \times 3 = 18$ , 6 is the multiplicand. See also *multiplier*.

## multiplication table

A list of multiplication facts for a given multiple, often learned by heart.

## multiplier

The multiplying number, e.g. in  $6 \times 3 = 18$ , 3 is the multiplier. See also *multiplicand*.

## N

### number bonds/pairs

Pairs of numbers with a particular total, e.g. the number bonds for 10 are all pairs of whole numbers, like 2 and 8, which add up to 10.

### numeral

The symbol you write to represent a number. We use the arabic numerals 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9.

### numerator

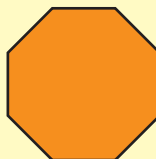
The number above the fraction line in a fraction. See also *denominator*.

$$\begin{array}{l} \text{numerator} \rightarrow 3 \\ \text{denominator} \rightarrow 4 \end{array} \quad \frac{3}{4} \quad \text{fraction bar or vinculum}$$

## O

### octagon

A 2-D shape with 8 straight sides.

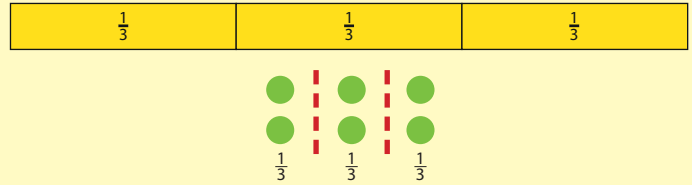


### odd

A whole number which cannot be divided by 2, there will always be one left over. It is not a multiple of 2. See also *even*.

## one third, $\frac{1}{3}$

The fraction made when dividing a whole into 3 equal parts.



## P

### pentagon

A 2-D shape with 5 straight sides.



### pictogram

A picture to show statistical information. A picture is used to represent one or a number of elements.

Walk	15 smiley faces
Car	10 smiley faces
Bicycle	5 smiley faces
Bus	3 smiley faces
Taxi	2 smiley faces

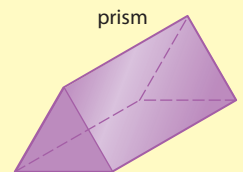
Key: 😊 = 1 child

## polygon

The general name for 2-D shapes with straight sides. Includes triangle (3 sides), quadrilateral (4 sides), pentagon (5 sides) and so on.

### prism

A 3-D shape with 2 identical ends, joined by rectangular faces. The cross-section of a prism is always the same as the ends.



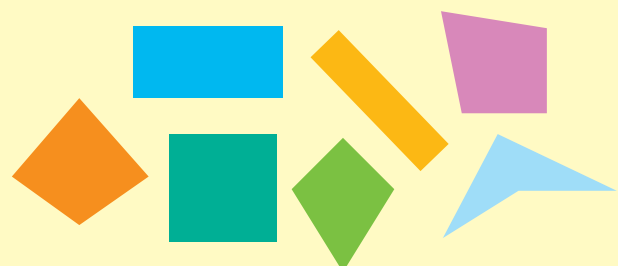
### product

The result of multiplying two numbers together, e.g. the product of 4 and 3 is  $4 \times 3 = 12$ .

## Q

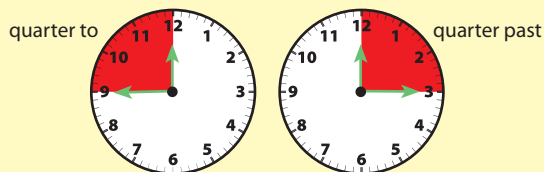
### quadrilateral

A 2-D shape with 4 straight sides. Rectangles, squares and kites are special sorts of quadrilaterals.



## quarter past, quarter to

Quarter past is 15 minutes after (past) the last o'clock time. Quarter to is 45 minutes after the last o'clock time and 15 minutes before the next o'clock time, or quarter of an hour until the next o'clock.



## quotient

The answer to a division calculation, e.g. in  $12 \div 6 = 2$ , 2 is the quotient. See also *denominator*, *dividend*, *divisor*.

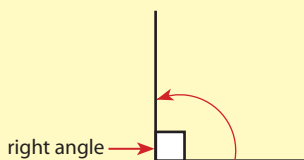
## R

### rectangular

An object with the shape of a rectangle, which is longer in one direction than the other. Each pair of opposite sides are equal and the angles are all right angles.

### right angle

A quarter of a full turn.



### row

A list of numbers, shapes or objects across a page, not down, often in a table or an array. See also *column*.



### rule

An instruction for carrying out a mathematical operation or continuing a pattern. It can be written using symbols or words. See also *sequence*.

## S

### second

Symbol: s. A measure of time. See also hour, minute.

### semi-circle

Half of a circle.

### sequence

A set of numbers made by following a given rule, e.g. the multiples of 3 are 3, 6, 9 and so on.

### single-, 2-, 3-digit numbers

The number of digits in a number, e.g. 3 is a single-digit number, 13 is a 2-digit number and 213 is a 3-digit number.

## sorting

Classifying objects, shapes or numbers into groups according to their properties.

## straight line

A straight line has no curves or corners and is the shortest distance between two points. It can be drawn using a ruler.

## subtrahend

The number that is subtracted from the minuend.

## sum

An addition of 2 or more numbers or the result of an addition, e.g.  $\text{augend} + \text{addend} = \text{sum}$  (or total).

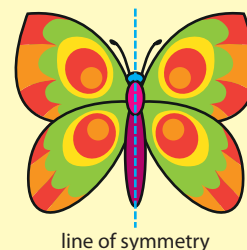
$$\begin{array}{ccccccc} & & 3 & + & 5 & = & 8 \\ & \nearrow & & & \nearrow & & \nearrow \\ & \text{augend} & & & \text{addend} & & \text{sum/total} \end{array}$$

## surface

The face or faces of a 3-D shape. They can be flat like the faces of a cube or curved like the face of a sphere.

## symmetry, symmetrical

A figure has line symmetry if it can be folded along a mirror line into 2 identical halves, which are mirror images of each other.



## T

### table

An arrangement of numbers or objects in rows and columns. See also *array*.

Year 1	Year 2	Year 3	Year 4
2	4	6	3
9	3	4	5
4	2	2	7

### tally

A set of marks used for quick and accurate counting. Usually counting in sets of 5 with 4 downward strokes and the 5th stroke is a diagonal line across the 4 downward strokes.

### tally chart

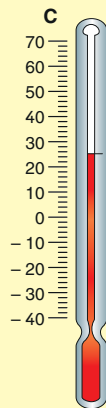
A table used to collect information using tally counting.

Travel	Tally	Frequency
Walk		12
Car		9
Bicycle		2
Bus		3
Taxi		2

## temperature

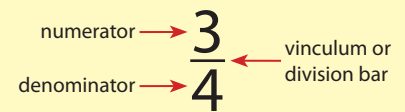
A measure of hotness. Usually in degrees Celsius, though Centigrade is often still used.

Symbol: °C.



## vinculum

The line that separates the numerator and denominator in a fraction.



## volume

The amount of liquid in a container, e.g. 1 litre of water in a 2 litre bottle. Measured in millilitres and litres. See also *capacity*.

## tens

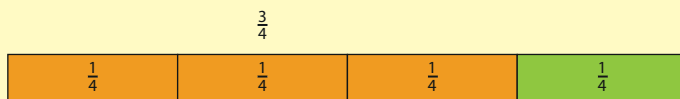
The position in a number where the digit represents tens, e.g. in 278 there is a digit 7 in the tens place, so there are 7 tens.

## tens boundary

When counting from ones to tens, the tens boundary is crossed.

## three-quarters

A fraction of a whole. 3 parts of a whole that has been divided into 4 equal parts.



## triangle

A 2-D shape with three straight sides.

## U

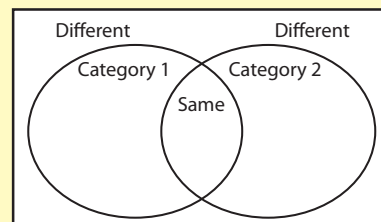
### units

The standard measures, e.g. the units of length are metres, centimetres.

## V

### Venn diagram

A diagram of interlocking circles, used to sort numbers or objects by category.



### vertex, vertices

The point where two or more lines or edges intersect. See also *face*, *edge*.

### vertical

Standing up straight.